IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 3, March 2022
Impact Factor: 6.252

Sustainable Eco-Friendly Vegan Bioleather

Prerak Gala[1] and Bhavna Pandya[2*]
Affiliation(s): Bioriidl, Riidl, Somaiya Vidyavihar[1-2]
K J Somaiya College of Science and Commerce, Somaiya Vidyavihar, Vidyavihar (E), Mumbai, Maharashtra, India.
*Corresponding Author: bhavna.pandya@somaiya.edu

Abstract: *Most leather produced across the globe is made from the skins of a variety of animals like cattle, sheep, tiger, goats, snakes, fish, leopard and many others. These animals are hunted and killed specifically for their skins. Extensive rearing of livestock can cause severe environmental impacts such as deforestation, water and land overuse. The Leather industry in India accounts for around 12.9% of the world's leather production of hides/skins and handles a robust annual production of about 3 bn sq. ft. of leather. This gave us the first motivation to work on this aspect. It was decided to work and find an alternative to produce leather which can remove slaughtering of animals and is a low cost process. This project deals with the development of common used material i.e. Leather using Biomaterials like Medusomyces gisevii (Kombucha) and Gossypium (Cotton). Cotton is used as a composite material to infuse with the base material made from Kombucha scoby. This project was conducted at Research Innovation Incubation Design Laboratory without any high end biological equipment for a period of 1 year. It was observed that the composite material was less brittle and more flexible than a normal material made of only Kombucha scoby.*

Keywords: Composite, Sustainable, Eco-Friendly, Biomaterial, Kombucha, Low Cost

REFERENCES

[1]. Green Lab. (n.d.). Kombucha leather material. Retrieved fromhttps://wiki.greenlab.org/2019/05/09/kombucha-leather-material/
[2]. Invest India. (n.d.). Leather. Retrieved fromhttps://www.investindia.gov.in/sector/leather Loes Bogers Fabricademy. (n.d.). Kombucha paper. Retrieved from https://class.textile-academy.org/2020/loes.bogers/files/recipes/kombuchapaper/
[3]. Jurgita, D., Florentina, S. and Judita, S. (2019). Kombucha bacterial cellulose for sustainable fashion. *IJCST*. 02-2019-0010.
[4]. Buckinghamshire New University (n.d.) Eco-friendly leather could spell a more sustainable future for fashion. Retrieved from https://www.bucks.ac.uk/news/eco-friendly-leather-could-spell-more-sustainable-future-fashion
[5]. Luis Quijano. (2017). Embracing Bacterial Cellulose as a Catalyst for Sustainable Fashion (Senior Honors Thesis). *Honors Program of Liberty University*. 01-2018-0015.
[6]. Marta Fernandes, António Pedro Souto, Fernando Dourado and Miguel Gama. (2021). Application of Bacterial Cellulose in the Textile and Shoe Industry: Development of Biocomposites. *Polysaccharides*. 07-2021-0002.
[7]. Hau Trung Nguyen, Nabanita Saha, Fahanwi Asabuwa Ngwabebhoh, Oyunchimeg Zandraa, Tomas Saha, Petr Saha. (2021). Kombucha-derived bacterial cellulose from diverse wastes: a prudent leather alternative. *Cellulose*. 08-2021-0003.
[8]. Pingkan Aditiawati, Rudi Dungani, Salsabila Muharam, Aminudin Sulaeman, Sri Hartati, Mustika Dewi and Enih Rosamah. (2021). The Nanocellulose Fibers from Symbiotic Culture of Bacteria and Yeast (SCOBY) Kombucha: Preparation and Characterization. Nanofibres book. 09-2021-0015.